1. 47°
2. 97°
3. 62°
4. 15; 40
5. D
6. H

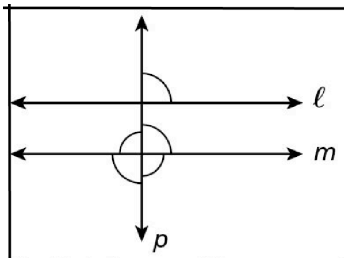
7a.
same-side int. ∡s

7b.
By the Same-Side Int. ∡s Thm.,
$m\angle QRT + m\angle STR = 180°$.
$m\angle QRT = 25° + 90° = 115°$,
so $m\angle STR = 65°$

8.
A is incorrect because the ∡s are supp., not ≅.

9.
By the Alt. Int. ∡s Thm., $x = y$, so $\frac{x}{y} = 1$.

10.



If all ∡s formed by m and p are ≅, then $m \perp p$. If the ∠ formed by ℓ and p is ≅ to the ∡s formed by m and p, it must be a rt. ∠, so $\ell \perp p$.

11.
$m\angle 1 = 75°$

12.
$m\angle 1 = 155°$

13.
By the Same-Side Int. ∡s Thm.,
$10x + 5y + 80 = 180$ and
$15x + 4y + 72 = 180$.
So $x = 4$ and $y = 12$

14. a = 120